FORE SYSTEMS®

ForeView
**Network Management
Release Notes**

Software Version 4.3.x

**MANU0162-03
12/15/97**

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1.0 Purpose of Software Release

These release notes highlight features of the *ForeView* 4.3.x release, now supporting the TNX-210 and TNX-1100 ATM switches, the MSC-900, and PowerHub devices.

2.0 Installation

Complete software installation instructions are included in Chapter 2 of the *ForeView* Network Management User's Manual. Before beginning the installation process, you will need the software distribution from FORE Systems. This file can be obtained via FTP or CD-ROM. To obtain the file via FTP, you must have FTP access. To obtain the file from CD-ROM, you will need the distribution CD-ROM from FORE Systems.

You will also need a UNIX workstation with at least 32 Mbytes of free disk space. If you are installing from the CD-ROM, the UNIX workstation must also be equipped with a CD-ROM drive.

NOTE TO USERS OF AIX:

- On AIX, the install file in not executable. In order to install *ForeView* 4.3 issue command **/bin/sh ./install**.

NOTE TO USERS OF HPUX:

- On HPUX, the filenames and directory names are all uppercase. You will need to enter **./INSTALL** to install *ForeView*. All the files under the installed *ForeView* directory will have the appropriate case.

2.1 Obtaining the Software Distribution via FTP

The software can be retrieved from FORE Systems via anonymous FTP using the following procedure. First, FTP to `ftp.fore.com`. and log in as `anonymous`. Enter your full e-mail address (e.g., `jdoe@somewhere.com`) when you are prompted for a password.

NOTE ▶ For security reasons, your password is not echoed.

Once you connect to FORE's FTP site (you will see the `ftp>` prompt), you must change to the `/priv/release/sunny` directory. This directory contains the *ForeView* software distribution files as well any .readme files which may contain important information about the software release.

NOTE ▶ Because the contents of this directory cannot be listed, please contact FORE Technical Support to obtain the latest list of file names.

Any .readme files can be retrieved as ASCII text. However, before you retrieve the software files, you must switch the transfer mode to `binary`.

2.2 UNIX

- If you are an existing *ForeView* user and you have made any changes to your system-wide *ForeView* configuration file, `/usr/fore/foreview/conf/foreview`, please save this file as `/tmp/foreview` now. The installation process will install a new system-wide configuration file in `/usr/fore/foreview/conf/foreview` and you will have to manually incorporate the changes from your saved file `/tmp/foreview`. You can always override the system-wide defaults by creating a".foreview" file in your home directory.

2.3 WinNT

- Save your customized `C:\FOREVIEW\conf\foreview.ini` file as `foreview.tmp`. Then, manually incorporate the changes from `foreview.tmp` into the newly installed `C:\FOREVIEW\conf\foreview.conf` file.

- The WinNT version of *ForeView* cannot be installed in an alternate directory where that directory name includes spaces (for example, `c:\fore view`). *ForeView* applications will not launch from such a directory.

3.0 Supported Operating Systems, Architectures, Hardware

3.1 Hardware

System: Sun

- SPARCstation (SPARCstation 10 Recommended)
- Ethernet, ATM SBA-200, or SBA-100 Network Interface (SBA-200 Recommended)
- Color monitor
- Free Disk Space: 32MB (minimum)
- Swap Space (Stand-alone): 64MB (minimum)
- Swap Space (OV, SNM): 96MB (minimum), 128 (recommended)
- Memory: 32MB (minimum) (64 MB recommended)

System: HP

- HP9000, Series 700
- Ethernet or ATM HPA-200 Network Interface
- Color monitor
- Free Disk Space: 32MB (minimum)
- Swap Space (Stand-alone): 64MB (minimum)
- Swap Space (OV, SNM): 96MB (minimum), 128 (recommended)
- Memory: 32MB (minimum) (64 MB recommended)

System: PC

- IBM-compatible PC with a Pentium CPU
- Ethernet or ATM ESA-200PC Network Interface
- Color monitor (1024 x 768, 256 colors)
- Free Disk Space: 100MB (minimum)

- Memory: 64MB (minimum)
- Mouse required, Microsoft or Logitech compatible

System: SGI

- MIPS R4000 series machines
- Ethernet or ATM GIA-200 Network Interface
- Color monitor
- Free Disk Space: 32MB (minimum)
- Swap Space (stand-alone): 64MB (minimum)
- Memory: 64MB (minimum)

System: AIX

- RISC System/6000 POWERstation or POWERserver
- Ethernet or ATM Network Interface
- Color monitor
- Free Disk Space: 130MB (minimum)
- Swap Space (stand-alone): 64MB (minimum)
- Paging Space: 192 MB recommended
- Memory: 64MB (minimum)

3.2   Software

System: Sun

- Solaris 2.5.x
- HP OpenView SNMP Platform or NNM Version 4.11
- SunNet Manager 2.2.2
- Netscape Navigator 3.0

System: HP

- HP-UX 10.10 or 10.20
- HP OpenView SNMP Platform or NNM Version 4.11
- Netscape Navigator 3.0

System: PC

- Microsoft Windows NT 4.0

NOTE The user's file system must support long file names.

- Netscape Navigator 3.0 or Microsoft Internet Explorer (MSIE) 3.0 or 4.0 (NOTE: See Release Notes for information regarding MSIE performance running under Windows NT.)

System: SGI

- IRIX 5.3, 6.2
- Netscape Navigator 3.0

System: IBM

- AIX 4.1
- NetView 4.x
- Netscape Navigator 3.0

4.0   List of New Features in the Product

This release of *ForeView* 4.3.x provides network managers the tools they need to better proactively troubleshoot, diagnose and understand the performance of their networks. Specifically, this release includes the following:

- *ForeView* 4.2 plus the VLAN Manager 4.2.6.
- Front Panel application supporting the TNX-1100, TNX-210, and MSC-900.
- Device Manager application for PowerHubs, including the PowerHub 8000 and ASN-9000 and support for Brulee.
- Enhanced Device Manager for the ES-3810, including FT 4.1, ESM-12FL, Redundant power supplies, and Telnet.
- DS1 and E1 Circuit Emulation Support. *ForeView* 4.3.x supports the new DS1 and E1 Circuit Emulation Services (CES) network modules. The CES modules provide adaptation from time-division multiplexed traffic (i.e., from PBXs, WAN multiplexers, channel banks, video codecs, etc.) to ATM. The DS1 and E1 CES network modules provide both structured and unstructured services, with a maximum of 127 connections supported per module.
- Scalability enhancements, including support for ISP MIB, Distributed Discovery Server, optimization of OVW access calls, and fvaddr optimization for unreachable hosts.
- Physical link status on OpenView maps.
- Display for ILMI registered addresses.
- Support for the HA processor and CEC Plus traps.
- LC Network Module support.
- Fabric Level Statistics support.

4.1   Summary of PowerHub Features

The following are the enhanced features of the PowerHub (PH) Device Manager in this release of *ForeView* 4.3.x :

- PH Device Manager provides support for BRULEE & MPOA releases of PH including all older versions in the field.
- PH Device Manager provides dual OID support (both Alantec & Fore OIDs). This means that the same PH Device Manager can manage PHs that use Alantec and Fore OIDs.
- PH Device Manager to provide frontpanel support for DS3, E3 & UTP AMAs for powercell700.
- PH Device Manager now provides support for PH8000 (based on PE2).
- PH Device Manager supports a 15 slot chassis of PH8000.

- In 15 slot front panels, the power supplies are not shown; instead, power supply icons are displayed at the bottom right corner. Clicking this icon with the mouse will launch a power supply dialog box (<configuration/system/powersupply>).

- 2x8FE card support (both configuration & statistics plotting).

- PH Device Manager supports segment-to-segment statistics graphing thru the fvgraph facility. A new seg2seg dialog can be launched from the fvgraph for this feature.

- PH Device Manager now reads *ForeView*'s fvsnmp.conf file to get command line parameters such as community strings, timeouts, etc.

- PH Device Manager ships a new IP VLAN configuration dialog to create/ modify/delete IP based VLANs in MPOA releases of PH.

5.0 Summary of Existing Features in the Software

- Automatic discovery and mapping of the network
- Color status of all switches, links and hosts
- Complete inventory management
- Channel tracing of virtual circuits
- Graphical display of link errors and host utilization statistics at the link, path or channel level
- Logging of statistics for import into spreadsheets and databases
- VLAN Manager

6.0 Known Issues or Concerns

6.1 Front Panel Applications

OAM Functionality

- The Front Panel application (fvpanel) does not support the *ForeThought* 5.0/MSC/TNX board level OAM enable/disable function. In order to enable OAM on this switch software version, use the ami command: `conf board oam`. For additional information, see the ATM Management Interface (AMI) Manual included with your ASX switch documentation set.

ES-3810 Functionality

- The Front Panel application for the ES-3810 will not launch a telnet session to the switch, in some cases, and will leave behind a couple of processes that will have to be terminated explicitly by the user.

PowerHub 6000 Front Panel

- When a Front Panel is launched against a PowerHub 6000 using PowerCell 600 ATM uplinks, the application may stack trace with the following error message:
`error: can't read "bkpStat": no such variable.`

A fix for this is available in a patch.

Cabletron 9A000 Front Panel

- When the Virtual Channel/Path Tool is launched against a Cabletron 9A000, the application may stack trace. A fix for this is available in a patch.

Switches with 8-port DS1/E1 Network Modules

- When a Front Panel is launched against a switch with 8-port DS1 or E1 network modules, the application may stack trace. A fix for this is available in a patch.

6.2   Documentation

- Some screen captures are incorrectly referenced in Chapter 2, PowerHub Management, of the PDF file of *ForeView* Device Manager User's Manual contained on the CD-ROM. The printed manual that comes with your software has the correct images.

6.3   Software Manager

- Before upgrading a switch using the Software Manager (fvupgrad), first check the contents of the switch's flash using AMI (see the ATM Management Interface (AMI) Manual). If more than two versions of switch software is on the flash, remove all versions that are not currently being run on the switch. Then proceed with the upgrade.

6.4   PowerHub

- When using the Spanning Tree protocol, setting the path requires version 7pe-2.6.3.1-RMON or later.
- Some graphing statistics in the PowerHub Device Manager are not supported.

6.5   Printing Maps on WinNT

The printing feature on NT requires either pure-postscript printers or printers with bigger buffer sizes. There is an article in the Microsoft development library CD which explains this problem in more detail and tells how the environment can be changed to make it work. The article number is -PSS ID Number: Q138600.

6.6   *ForeView* Help and Microsoft Internet Explorer

A bug in file URL handling in Microsoft Internet Explorer (MSIE) 3.01 causes failure of *ForeView* help links.

Problem Description:

MSIE 3.01 does not correctly process a URL of the "file" type if the URL contains an "anchor tag" segment. The purpose of the anchor tag is to direct the browser to begin displaying the HTML page at a specific location within the document. For example, given the URL:

 file:///C|/foreview/fvhelp/dm_05.htm#100056

the browser should load the file C:\foreview\fvhelp\dm_05.htm and begin displaying at the hypertext anchor with the tag "100056". MSIE 3.01 does not parse the anchor tag, instead attempting to open the file "dm_05.htm#100056", which does not exist.

Impact:

This bug causes the *ForeView* on-line help system to fail in many instances.

Work-around 1:

1. You can install Netscape 3.0 or 4.0 Communicator on your system and use it as your *Fore-View* Help browser, even if you use MSIE for other Web browsing.

2. If you must use MSIE 3.01, you can configure the *ForeView* on-line help system to retrieve *ForeView* help pages from a Web server. (Anchor tag processing works correctly for 'http' type URLs.) To do this, you copy the *ForeView* fvhelp directory (and its subdirectories) to your Web server's 'htdoc' location, and then edit your FOREVIEW.INI file to set the "Fvhelp.httpRoot" resource to point to the Web server location. For example, setting the resource to   "Fvhelp.httpRoot: //webhost:80/htdoc/fvhelp" would cause *ForeView* tools to attempt to access the previously mentioned document with the URL

    http://webhost:80/htdoc/fvhelp/dm_05.htm#100056

3. Upgrade to MSIE 4.0 when it becomes available (assuming the next release fixes the bug.)

> **NOTE** ▶ If MSIE 4.0 is installed prior to the installation of ForeView 4.3, there may be a conflict with the `Fvhelp.browser:` resource in the `foreview.conf` file. The following steps explain how to edit the resource to enable the use of MSIE as the help browser.

a. Check the resource `Fvhelp.browser:` in the `foreview.conf` file. If the resource looks like the following:

    `Fvhelp.browser: C:\PROGRA~1\Plus!\MICROS~1\iexplore.exe"`

b. Edit the resource to remove the quote mark at the end of the resource string. For the Help system to work using MSIE 4.0, the `Fvhelp.browser:` resource should look similar to the following:

    `Fvhelp.browser: C:\PROGRA~1\Plus!\MICROS~1\iexplore.exe`

Work-around 2:

Modify the help subsystem to specify the IE browser version so that any URL passed to a 3.01 browser will have the tags removed from the URL first. This is activated by these lines added to the *ForeView* initialization file:

Fvhelp.iexploreVersion

If you are using Internet Explorer as your browser, identify the version you

are using. This is only applicable to NT, as Internet Explorer is not

currently available under UNIX. Version 3.01 must be specified if your

Internet Explorer fails to come up on some help invocations (i.e. Port Status

help fails with an IE error that includes a URL with a # sign near the end).

Also, you can override it with this resource if you need to avoid this

behavior in any future IE version.

#

#if NT

#Fvhelp.iexploreVersion: 3.01

#endif

The help temporary directory, when none is specified in the *ForeView* initialization file, is $FOREVIEW_HOME/tmp (the foreview tmp directory). This applies to all platforms.

6.7 Problem Related to HP OpenView/MIB Installation

There is a known issue with HP OpenView NNM 4.1.x on Solaris where xnmloadmib core dumps during MIB installation. This problem effects the *ForeView* installation. Make sure you are running the latest consolidated patch from OpenView, which at this time is PSOV_01782. This patch contains a fix for the symptom:

PSOV_01684:

- xnmloadmib coredumps on Solaris.
- xnmloadmib does not accept mib definitions having enumerated integers without space between them.

You should be running NNM 4.1.x with the PSOV_01782 patch or greater in order to be sure you have a fix for this symptom.

6.8 VLAN Manager

The VLAN Manager, 4.2.0, has a problem in managing 3810 devices because the association of VLAN and proxy-lec components was not being handled correctly. ForeView 4.2.6 was patched to fix the problem. This document will describe the steps that need to be taken by the user to manage 3810 devices successfully with the VLAN Manager.

The main steps are listed first, followed by a detailed description for each step.

1. Define an ELAN that will be used for management services only.
2. Start LANE services for this ELAN.
3. The 3810 must be configured from the console, so that it is able to join the ELAN, and reachable via the ELAN defined in step 1. The details will depend on the current configuration of the 3810.
4. Start the VLAN Manager and define the VLANs/ELANs that will be used for carrying network traffic [as opposed to management traffic].

6.8.1 Details

We recommend that an ELAN be defined for carrying management information. The simplest mechanism is to ensure that the "default" ELAN is used for management purposes. It requires LANE services to be started for this ELAN, as clarified by the example below.

Example:

Use the following commands from an AMI session, to create "default" ELAN on a FORE ASX200Bx switch, and to start the LECS.

- This step must be performed by users who are yet to configure the network.

localhost::> conf lane les

localhost::configuration lane les>new 50 47000580ffe1000000f21a34f70020481a34f750 default colocated_bus

localhost::> conf lane lecs

localhost::configuration lane lecs> new 05 -default 47000580ffe1000000f21a34f70020481a34f750

- This step must be performed only by users who already have a LECS running in their network.
- An example configuration file for the user is shown below and followed by the new configuration file after modifications.

CURRENT FILE

Match.Ordering: grey, red, yellow

grey.Address: 47000580ffe1000000f21c20480000ef048a0010

grey.Accept: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

red.Address: 47000580ffe1000000f21c234c0000ef04f27020

red.Accept: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

yellow.Address: 47000580ffe1000000f21c20480000ef048a0030

yellow.Accept: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

NEW FILE

Match.Ordering: default, grey, red, yellow

default.Address: 47000580ffe1000000f21a34f70020481a34f750

default.Accept: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

grey.Address: 47000580ffe1000000f21c20480000ef048a0010

grey.Accept: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

red.Address: 47000580ffe1000000f21c234c0000ef04f27020

red.Accept: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

yellow.Address: 47000580ffe1000000f21c20480000ef048a0030

yellow.Accept: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

- The 3810 must be configured so that it is able to join the default ELAN and is reachable by any other device that is a lane client on the default ELAN.
- 3810 devices, that are yet to be configured by the user, must be assigned an IP address through the console interface. It will automatically join the default ELAN and be ready for use with the VLAN Manager.
- 3810 devices that have been already configured with one or more ELANs, other than default will have to be reconfigured, using the console interface. Consider a 3810 configured with VLANs grey, red and yellow.

Let the name of ELAN/VLAN at Index 1 on the 3810 be "grey".

1. Rename "grey" to "default". This will delete the grey proxy-lec.
2. Ensure that an ATM Forum LEC is created for "default", using the wellknown LECS address, at Index 1.
3. Delete all the remaining VLANs, red and yellow, using the console interface. These VLANs will be recreated in the next step using the VLAN Manager.

4. Install *Foreview* VLAN Manager with the 4.2.0 patch on a machine that is a lane client on the default ELAN. Alternatively, the machine must be able to reach (or ping) all the lane clients on "default" ELAN.

We recommend the following mechanism to create hybrid VLANs with VLAN and ELAN components using *ForeView*. We continue with the example from the previous step for a 3810 that has been configured with VLANs red and yellow. In addition, the VLAN "grey" needs to be recreated using *ForeView*.

1. Create a domain, specifying the configuration server.
2. Create the 3810 device as a member.
3. Create a "default" ELAN and specify the LES/BUS.

NOTE: The VLAN Manager *will* allow you to specify the selector byte, 50, in the above example. It is *important* that you choose this selector byte. Otherwise, there is a possibility of the LES/BUS being stopped for the default ELAN, causing loss of connectivity.

NOTE: Do *NOT* drag and drop the 3810 to the "default" ELAN, otherwise, you may lose connectivity to the 3810.

Creation of "red" VLAN.

Assume that "red" is a port based VLAN and has ports B1-B4, C1-C4 associated with it.

1. Create an ELAN called "red", and specify the LES/BUS for the ELAN.
2. Set the selector byte correctly, "20", in our example from the previous step. Otherwise, the VLAN Manager will stop services for red and restart services at the selector byte that you specify.
3. Create a port based 802 style VLAN called "red_eth".
4. Drag and drop the 3810 member on "red_eth". A dialog will come up showing the current port assignments on the 3810. Select all ports you want to be on "red", ie, B1-B4,C1-C4 and add them to "red_eth".
5. Create a VLAN of unknown type called, "hybrid1". This can be accomplished by not specifying the type for this VLAN. Do *NOT* select "Hybrid VLAN" for the VLAN type.
6. Drag and drop ELAN "red" to VLAN "hybrid1".
7. Drag and drop 802 VLAN "red_eth" to "hybrid1".

At this point, the configuration for "red" is complete and it is ready for a "Commit" operation.

Creation of "yellow" VLAN

Assume that "yellow" is a Mac based VLAN, containing 2 MAC addresses: 112233445566 and 123456123456.

1. Create an ELAN called "yellow", and specify the LES/BUS for the ELAN.
2. Specify the selector byte correctly, "30" in our example.
3. Create a Mac based 802 style VLAN called "yellow_eth", with Mac addresses, 112233445566 and 123456123456.
4. Drag and drop the 3810 member on "yellow_eth".
5. Create a VLAN of unknown type called, "hybrid2". This can be accomplished by not specifying the type for this VLAN. Do *NOT* select "Hybrid VLAN" for the VLAN type.
6. Drag and drop ELAN "yellow" to VLAN "hybrid2".
7. Drag and drop 802 VLAN "yellow_eth" to "hybrid2".

At this point, the configuration for "yellow" is complete and it is ready for a "Commit" operation.

Creation of "grey" VLAN

Assume that it contains B5-B8 and C5-C8. Its creation will be similar to that of creating "red".

1. Create an ELAN called "grey", and specify the LES/BUS for the ELAN.
2. Specify the selector bye correctly, "10" in our example.
3. Create a port based 802 style VLAN called "grey_eth".
4. Drag and drop the 3810 member on "grey_eth". A dialog will come up showing the current port assignments on the 3810. Select all ports you want to be on grey, ie, B5-B8,C5-C8 and add them to "grey_eth".
5. Create a VLAN of unknown type called, "hybrid3". This can be accomplished by not specifying the type for this VLAN. Do *NOT* select "Hybrid VLAN" for the VLAN type.
6. Drag and drop ELAN "grey" to VLAN "hybrid3".
7. Drag and drop 802 VLAN "grey_eth" to "hybrid3".

At this point, the configuration for "grey" is complete and it is ready for a "Commit" operation. Perform a commit operation, and the 3810 device will be configured correctly with default, red, yellow and grey VLANs.

NOTE: Consider a VLAN called "blue" configured on the 3810 using the console interface. Ports D1-D8 and mac addresses, "654321654321" and "665544332211" are associated with "blue". The VLAN Manager will not be able to represent this information with the current patch.